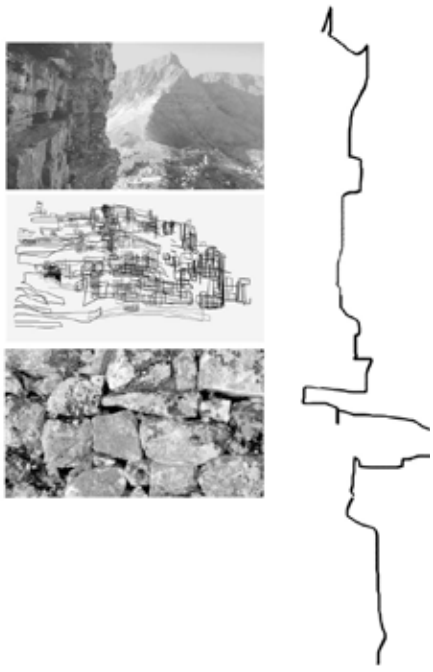
TRANSLATIONS OF THE MOUNTAIN

exploring natural phenomona through ephemeral drawings and intransigent matter in design



sarah allderman

Translations of the Mountain
exploring natural phenomona through ephemeral drawings and intransigent matter in design

Sarah Allderman
Dr. Nicholas Coetzer

This dissertation is presented as part fulfilment of the degree of Master of Architecture (Professional) in the School of Architecture, Planning and Geomatics, University of Cape Town
Date
"I hereby:
a. grant the University free license to reproduce the above dissertation in whole or in part, for the purpose of research.
b. Declare that:
(i) The above dissertation is my own unaided work, both in conception and execution, and that apart from the normal guidance of my supervisors, I have received no assistance apart from that stated below: XXXXX
(ii) Except as stated below, neither the substance or any part of the dissertation has been submitted for a degree in the University or any other university.
(iii) I am now presenting the dissertation for examination for the degree of Master of Architecture (Professional)"

Plagiarism Declaration:

1. I know that plagiarism is wrong. Plagiarism is to use another's work and pretend that it is one's own.
2. I have used the Chicago / Harvard convention for citation and referencing. Each contribution to, and quotation in, this report from the work(s) of other people has been attributed, and has been cited and referenced.
3. This report is my own work.
4. I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.

Signature _____

Abstract

My interest this year was an architecture based on experience and how the architect rationalizes the complexities of the ineffable. With experience being such an intangible phenomena, whilst architecture is such an intransigent material, the process became about how to translate the one to the other through the process of drawing.

By using Table Mountain as a site for exploration, the intangible experience of dwelling on the mountain was studied as an experience to be translated into architecture. This was explored through a process of cognitive and architectural drawings; ephemeral to tectonic details.

The dissertation follows the process of landing on site, experiencing the space subconsciously through the intelligence of the body, and reflecting thereupon through cognitive drawing. The exploration follows the translation of these cognitive drawings into architectural drawings, in a way that returns to the experiential quality that which they originally depicted. Translating two-dimensional paper into three-dimensional imagined experience, which is embodied all the way through to the tectonic details.

The process informs an architecture which allows the user's mind to drift to the memory of the mountain, re-orientating themselves to their natural surroundings and enhancing their dwelling experience.

Contents

INTRODUCTION

Drawing intangible phenomena

How does one create an architecture that is based on experience when experience is such an intangible phenomena?

The point of this investigation has been to enable a type of architecture that is informed by an experience using drawing as a tool. Subsequently, how experience lands itself in tectonic details.

Experience is challenging to study or understand, as it is not tangible. Therefore, drawing is used as a tool for investigation, as it is a reflection of one's ideas and imagination. One can translate their imagination and ideas into drawing and it becomes an object that can be reflected upon or understood by others.

The site of investigation was taken from Table Mountain. The understandings of being in the mountain were studied in depth in order to be translated into an architectural form. It was hoped to create an architecture that understood how one dwelled and felt in a space, in a way that uplifted the user's experience.

Two types of drawings were used in the investigation to translate experience into a tangible artifact and subsequently translate tangible experience studies into spatial form. These were defined as cognitive drawing and architectural drawing.

Cognitive drawing is defined as a more ephemeral type of drawing. The drawings are done intuitively and express subjective understandings. They can be seen to be more expressive than realistically representational and their power lies in the lack limitation to directly depict things. This allows for their ability to be 'read into' by a user. One can apply one's imagination to them and see into what they could suggest, weather its purposefully or sub-consciously.

Architectural drawing is understood as being more realistically representational of a defined object. The drawings are conventional and have rules such as scale and types; for example, plan and section drawings. These conventions enable it to be universally translated. The drawing limits imagination and rather depicts absolute purpose of a defined final outcome.

The two drawings represent a process that originates in intangible phenomena and develops into tangible matter. The outcome of both these drawings becomes about how to translate them, from rich expressive cognitive drawings into an absolute type of architectural drawing. Consequently, how they inform the type detailing of tactile materials and architectural structure that re-iterates their original experiential objective.

The format of the dissertation report parallels the process of exploration. It surveys the studies from cognitive drawings to their translation into architectural drawings and how they express experiences that manifest themselves into tectonic detailing. The development of design is discussed through drawings and studies that were created throughout the course to emphasize the importance of the process of making. The first section of the report is about experiencing the natural landscape and using cognitive drawings to interpret and capture the quality of the experience. The second part of the report follows how these cognitive drawings can be unpacked as studies of experience. Thereafter, how these studies of experience can be translated into architectural drawings. Thirdly, how the experiences can be constructed in materials. The result of which is an architecture that has been developed through the experience of the user as its core informant.

SECTION 1

Cognitive drawings as interpretations of the natural landscape experience

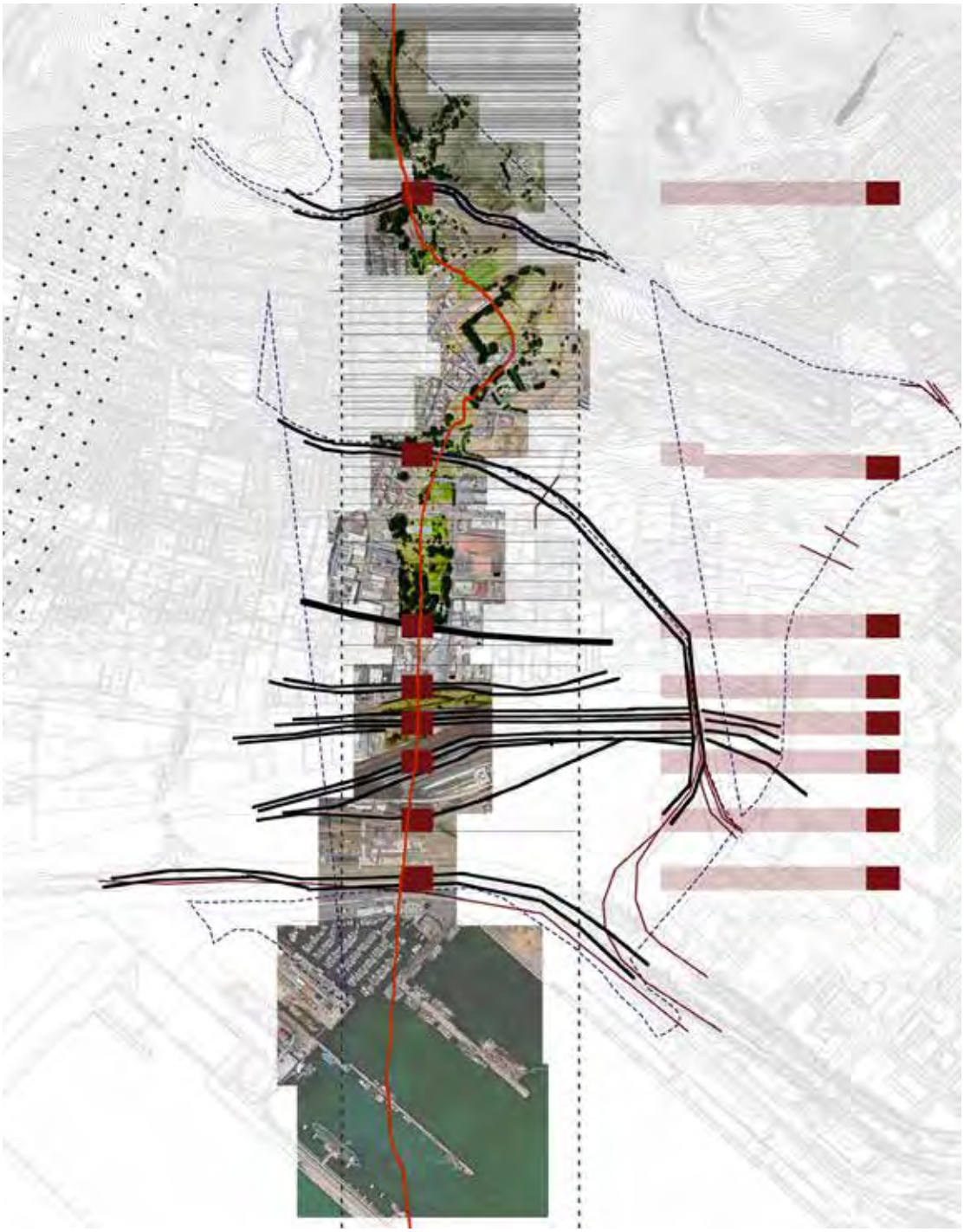


Figure 1. Plan showing pedestrian walk from Devil's Peak to the foreshore

The start of the investigation was landing on the site. The site of the study was a section line across Table Mountain drawn from Devil's Peak through to the foreshore as seen in figure 1. The initial site visit was a walk from UCT up to Rhodes Memorial, towards the King's Block House and Devil's Peak. After which, we traversed along the contour paths descending into the City Bowel. Before a known design, or objective was achieved, a set of drawings was done as a type of site analyses. These drawings had no intent of realistic representation or purpose. They were done intuitively, with no known or preconceived outcome and therefore can be categorized as cognitive drawings.

Cognitive drawing.

Pallasmaa's Thinking Hand describes the importance of understanding a space through both mind and body. He explains the intelligence of our subconscious that can be revealed through cognitive drawings and representations. His approach is based on the idea that the human body holds an intelligence that cannot be described rationally. He explains how the human body is capable of communicating knowledge subconsciously. This could suggest that one's body has a memory. When we experience space, our body can remember the sensations. This intelligence is expressed in the way that 80 percent of communication between people is estimated to be achieved through body language rather than verbal channels.[1]

He continues to explain how the drawing reflects ideas through the intelligence of the hand. The drawing is defined here as being a representation created by our body (both mind and hand), which could lead to intuitive truths. Cognitive drawing can be understood as the drawing that an individual does subconsciously. As body language communicates subconsciously in conversation, it could be suggested that cognitive drawing translates how one's body and mind 'thinks' subconsciously. Pallasmaa therefore argues for the importance of cognitive drawing in architectural practice as a means to translate thoughts that cannot be rationalized.

[1] Pallasmaa,j. (2009). *The Thinking Hand.* Chichester: Wiley. p.14

Figure 2. Cognitive charcoal drawings completed upon first site visit by the group

The architect's skill lies in how they rationalize the irrational intangible experience. Pallasmaa describes the capability of the architect as being their ability to translate the complex and multiple dimensioned design task into embodied experience and form. He describes how this is achieved through the subjectivity of the architect. The architect uses their lived experiences and memories to translate the design task into a lived form. He discusses how he achieves design solutions in a biological manner.[2] This suggests that the design slowly grows in all directions from something , rather than a rational and linear methodology . Complexities of architectural ideas are far too complicated to be dealt with in a exclusively rationalized manner. Pallasmaa goes on to describe the importance of this cognitive practice.

> The role of this fundamental, unconscious, situational and tactic understanding of the body in the making of architecture is grossly undervalued in today's culture of quasi-rationality and arrogant self-consciousness[3]

Figure 2 alongside is of the first site drawings. The drawings, as Pallasma describes, are intuitive and don't realistically portray anything. Yet, one can still read into them. They portray the experience of landing on site and the walk that traversed us along the contour of the mountain. On the day of the walk the mountain had recently been burnt, creating a specific atmosphere that has been captured in the drawings through the use of charcoal. Image A can be read into to show the experience of walking towards large mountains in the distance. The sense one's body feels when walking towards an overwhelming moment of solid mass. The mountain becomes a backdrop that engulfs one as one nears it. Image B looks at the texture of the site and the quality of the ground. The picture describes the blackness of the burnt ground. The type of ground the earth is at that point could make associations to the noise that walking across the surface would make. Images C and D describe the descending pathway and how the quality of the space changes from contour to contour whist image E shows the experience of the body walking along the winding path. The repetition of the spiral expresses the nature of how we gently descended the mountain rather than cutting directly down the section cut line.

The ephemeral charcoal drawings can be 'read into' by a subjective individual as individuals have memories that they are able to associate things with. The act of associating memories can be described through phenomenology.

---

[2] Pallasmaa,j. (2009). *The Thinking Hand.* Chichester: Wiley. p.15

[3] Ibid p.15

Figure 3. Experiential line drawing depicting atmospheres across Table Mountain

Phenomenology

Phenomenology is described by Norburg-Schulz as being the, 'return to things.'[4] This contributes to the idea that 'things' or objects define a place, where, 'place' is seen as a meaningful space. These concepts are described in Norburg-Schulz's, Phenomenon of Place. Schulz quotes Heideggar to explain how, in poetry, the writer depends on the reader's memory and their understanding of 'things' such as snow, window, tree and table to create meaningful poetry. This is illustrated through an analysis of George Trakl's poem, A Winter Evening. Where Trakl relies on the readers associations with words to create an atmosphere. It is therefore understood that objects, or 'things' have associations that the individual holds subconsciously.

Similarly, if an individual has experienced the phenomena of walking in the mountain, they will have memories thereof. These memories could be triggered by associations to tangible things, such as the varying dappled sunlight of the trees, sandstone rocks, sounds of stepping on gravel, an alike temperature or even a similar motion of walking. To an extent, these tangible things embody an experience.

Drawings embody these associations, and therefore experiences, too. The drawings started expressing experience and enabled experience to be unpacked and studied. Figure 3 alongside, is a line drawing of the mountain. The drawing is represented as a series of atmospheres that vary across the slope. Each atmosphere is represented in a different style. These styles attempt to embody each atmosphere and create a code system associating ephemeral drawing style to atmosphere and locating it along the slope. The steep tall rock face atmosphere is depicted in hard straight geometric lines. These express ideas of exposed rock and sun stricken hard surfaces. The forest section is depicted in a smoother flowing pen style. The more organic lines embody a softer atmosphere. One could picture a shadier scene with a softer materiality. A dark harder line represents the buildings and expresses a more purposeful presence compared to the soft growth of the forest. The dark lines appear more static and dense, like the atmosphere of being within inner city Cape Town.

[4] Norburg-Schulz, C. (1976). *The Phenomonon of Place*. New York: Princeton architectural print. P.415

SECTION 2

Unlocking cognitive drawings as studies of experiences and interpreting these into archetypes of phenomena.

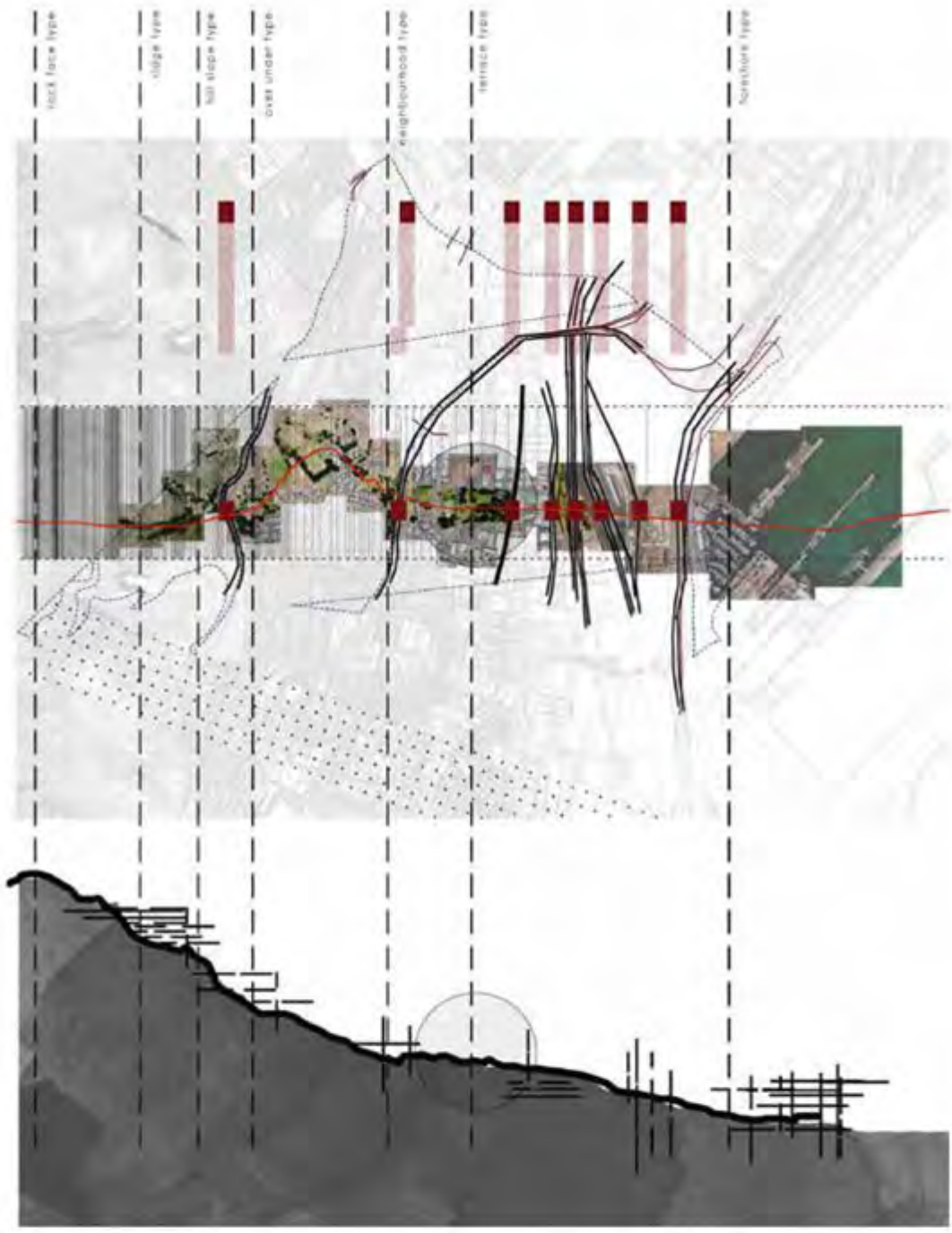


Figure 5. Analyzing the mountain section as experiences

Figure 4. 'Tool kit' study. Archetypes of phenomena unpacked through cognitive exercises

Figure 4 began analyzing the mountain as a set of experiences. The figure shows the section line from the top of Devil's Peak to the foreshore. The corresponding plan depicts the pedestrian route thereof. The exercise labeled different atmospheres across the slope. Once labeled, atmospheres became studied as archetypes.

Figure 5 shows seven archetypes that were extracted from the section. These are; rock face; ridge walk; hill slope; over under; neighborhood ; terrace and foreshore. Primarily, each archetype is exemplified by a cognitive drawing as referred to in row 1. A series of cognitive studies were done to unpack what each of the archetype experiences and drawings represented.

Vertical contour model

Each archetype was built up as a vertical contour model. This model expressed how each archetype landed on the slope condition of the mountain. For instance, how the Woodstock neighborhood houses are a fine enough scale to be built into the slope, creating inverse active spaces between the forms. The ridge walkway cuts along the slope creating a movement ribbon.

Growing model

A growing model was made of each archetype to suggest how each condition would be grown or age. Card was used to imitate solid hard surfaces, which are harder to shape. Clay was used to imitate living surfaces, which grow, wash away and can be molded. This was effective in illustrating the ridge pathway, where the pathway's cavity affects the mountain slope. The cavity becomes a machine to shaping the slope and the cavity grows over time. Plaster of Paris was used to imitate that which is cast and constructed, although the clay started growing onto the blocks, the blocks remain unchanged.

Words

Subjective words were used to describe each atmosphere and suggest the experience of the space. The rock face condition, for instance, suggested, "you feel small here", "safe" and, " you like to think about things from up here."

These exercises enabled me to develop a type of tool kit of experience archetypes. As the phenomena of experiences are subjective and intangible, the tool kit enabled me to refer to something that was more defined.

SECTION 3

How cognitive ephemeral drawings, or, studies of experience can be translated into architectural drawings that are based in reality.

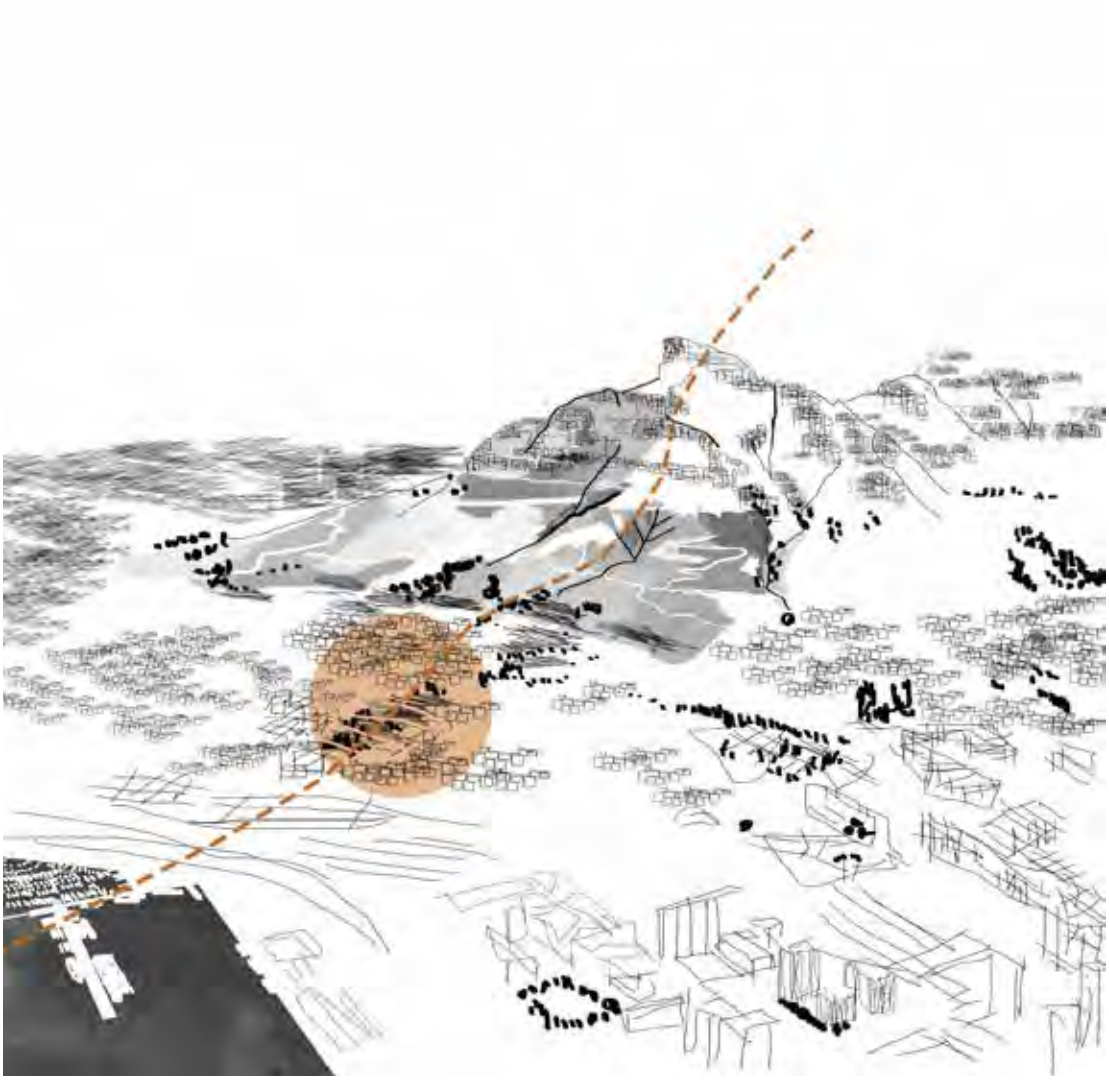


Figure 6. Experiential line drawing depicting the presence of the seven archetypes of phenomena visible from the site

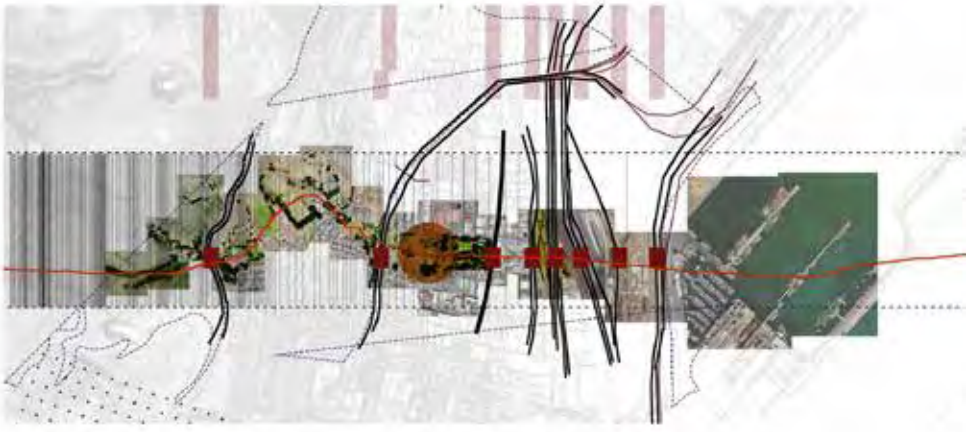


Figure 7. Presence of the mountain on site

How cognitive ephemeral drawings, or, studies of experience can be translated into architectural drawings that are based in reality.

The Woodstock public swimming pools were chosen as the site for an architectural intervention. The site is located in the middle of the section line and is an extension of the mountain. From the position of the site all the experiences, which were studied, are visible. This enables for all the experiences to be drawn into the architecture in a way that the viewer has a more direct link to the origin of the atmosphere as shown in figure 6. Figure 7 shows the presence of the mountain experience on the site. The photograph was taken looking up the slope towards the existing Woodstock Swimming Pool. The site seems to hold the mountain as an extended experience, with its proximity being close enough to understand its large mass and tactile details ; but far enough to grasp it as a whole entity.

Once a site was chosen, the investigation began to translate the cognitive drawings into architectural drawings. Robin Evan's Translations from Drawing to Building and Other Essays defined the architectural drawing and the process of translating ideas.

Architectural drawings

Evans discusses the difference between cognitive drawings and architectural drawings. He describes the importance of the drawing as a tool in architecture. Although he discusses the drawing as possibly being overvalued- and rather that its power lies in its properties, or the ideas that it embodies rather than its likeness to the subject (the building), he acknowledges that the usefulness of the drawing in architecture is its assumption that the drawing is true.[5] This enables the drawing to be the, 'unfailing communicant'.[6] This way of working is seen to differ to that of art or cognitive work. Evans discusses how although art and architecture are closely linked, they differ in the way that architecture appears to be disjointed. Evans describes this in the way that a sculptor works on the sculpture, the artist – the painting, whilst the architect works on the drawing or another, 'intervening medium', and not the building.[7]

He describes drawings as having direct and experiential qualities. Experiential architectural quality drawings, such as cognitive drawings, gives rise to the suggestion that the architecture drawing could stand by itself as a piece of art. Evans converses a scenario where the drawing is something that ' is to be consumed by the viewer'.[8]

[5] Evans, R. (1997). *Translations from Drawing to Building and Other Essays*. London: Architectural Association London p 154.
[6] Ibid p.155
[7] Ibid p.156
[8] Ibid p.160

Evans goes on to discuss the limitations and advantages of drawing techniques that are developed to communicate architecture. The Campanile drawing is able to imply depth through its representation of the stone. Implied depth is explained by Evans as being able to translate 2 dimensional thin paper into the impression that it extends much deeper. 'It is an attempt to make virtual space and real space at one and in the same time and the same place'. [11]

Evans describes the limits and advantages of representing architecture as drawing on paper. The advantage is explained as the ease of communication and translation through conventional means. The limitation of drawings is explained as how the two dimensionality and representational properties of paper creates a too cautious control over a virtual connection between the drawing and the building and an embellishment of frontalities.[12]

> It may seem obvious that only when fighting this tendency, seeing outside the drawing technique, his imagination soaring above the confines of the medium, can the architect create fully embodied three-dimensional form.[13]

Evans then counter argues this point by explaining that limitation allows for universal translation. He explains that although frontality and the two dimensionality of the paper is still dominant, there is an expression of rigorous technique. This technique is enabled by the limitation of the drawing. In other words, the drawing can be controlled. Evans suggests that a complete control over the drawing might allow for the design to be free of the confinement of the paper. If there were no limitation or confinement of conventionality, then the architect would lose control over all.

The investigation process became about translating the cognitive drawings into this type of architectural drawings. The aim was to use rigorous limitations of architectural drawings combined with one's imagination in order to, 'see outside the drawing technique' and create an exemplified experience.

---

[11] Evans, R. (1997). *Translations from Drawing to Building and Other Essays.* London: Architectural Association London .p .169.

[12] Ibid p.172

[13] Ibid p.172

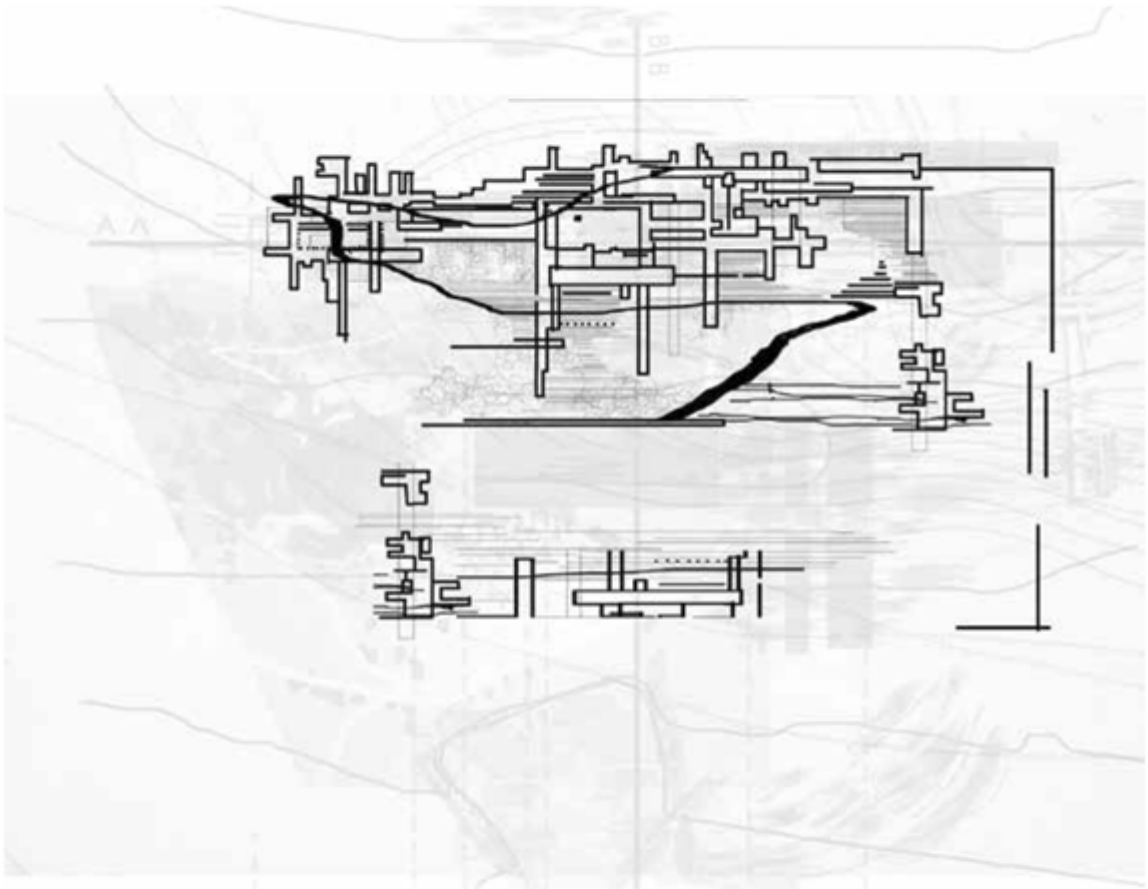


Figure 11. Abstract building plan

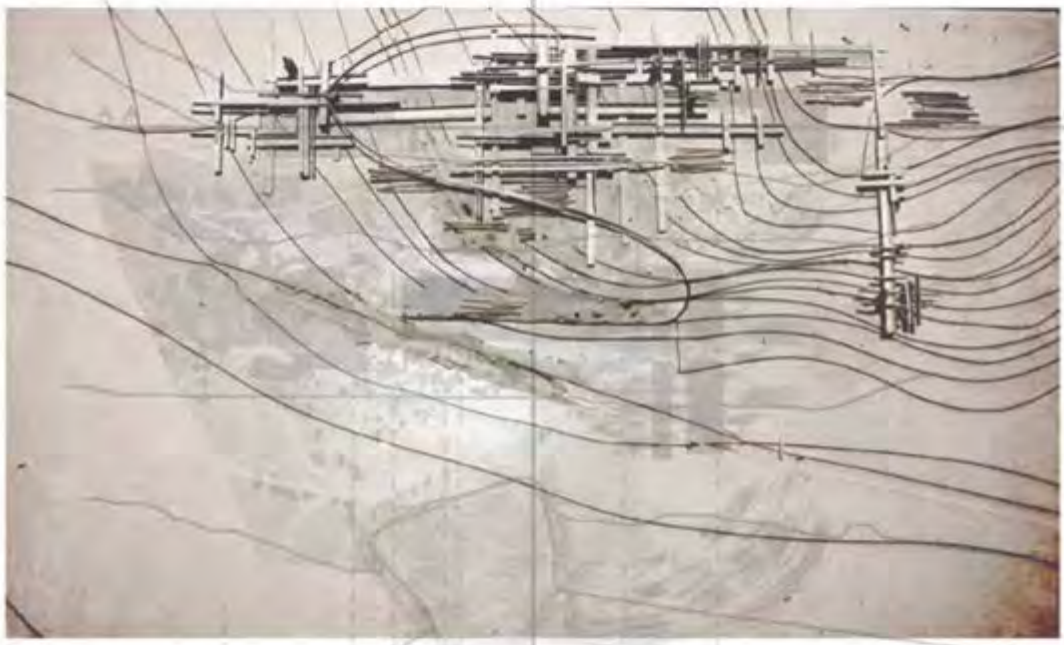


Figure 10. Collage plan model suggesting space and structure.

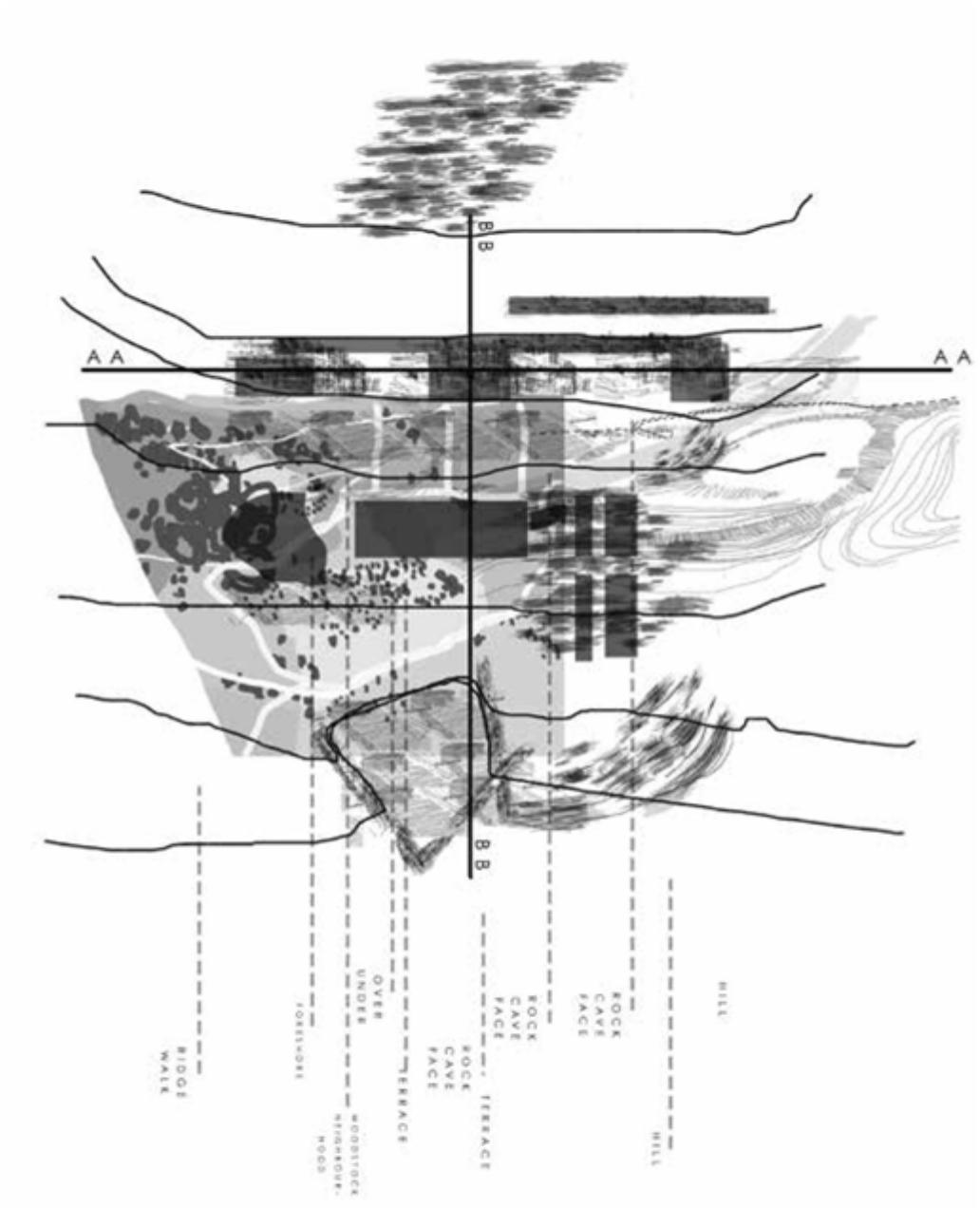


Figure 9. 'Tool kit' collage plan

Figure 8. Satellite picture site plan

Layering Process

As a study , contrasting direct (figure 8) and experiential (figure 9) drawings were generated to be merged to unlock a drawing between them. Figure 8 and 9 are both architectural drawing plans, which represent the site. They both have conventions of architectural drawings such as scale , plan view, and represent a space based in reality. Figure 8 conveys direct qualities as it represents factually what exists on the site. Figure 9 was created using the 'tool kit' of atmospheres into a collage overlaid onto figure 8 . The drawing represents the same site, however, it has a more experiential quality. Although the scale and contour lines are factual, the drawing's ephemeral quality suggests atmospheres that the viewer could read into and imagine. One could read into the drawing to see suggestions of weather, in the rock face type's eroded texture; or one could see walking circulation journeys in the ridge types zig-zagging line.

The process of the investigation was to define an architecture that landed between these two drawing types. An architectural drawing that had a direct quality, which also embodied the experiential atmosphere suggested by the ephemeral drawing.

The development proceeded to become a series of studies that interacted between the direct and the experiential qualities of representation. Figure 10 illustrates a model, which was built of figure 9. The model translated the collage into a spatial reality that dealt with slope and scale. It also suggested a tectonic order, indicative to a type of structural gutter, which contrasted the undefined fluctuating ground plane. A photograph of the model was then traced into a plan drawing as seen in figure 11. The drawing started to characterize a more direct quality. This is evident through the line weights and room types. One could start reading the type of spaces as being thick inhabited walls that hold the building up against the slope and open into a series of courtyards. The circulation can be seen traversing diagonally across the building. Contrasting the thick hard walls, one can see a softer quality within the courtyards and circulation in the lighter line weight.

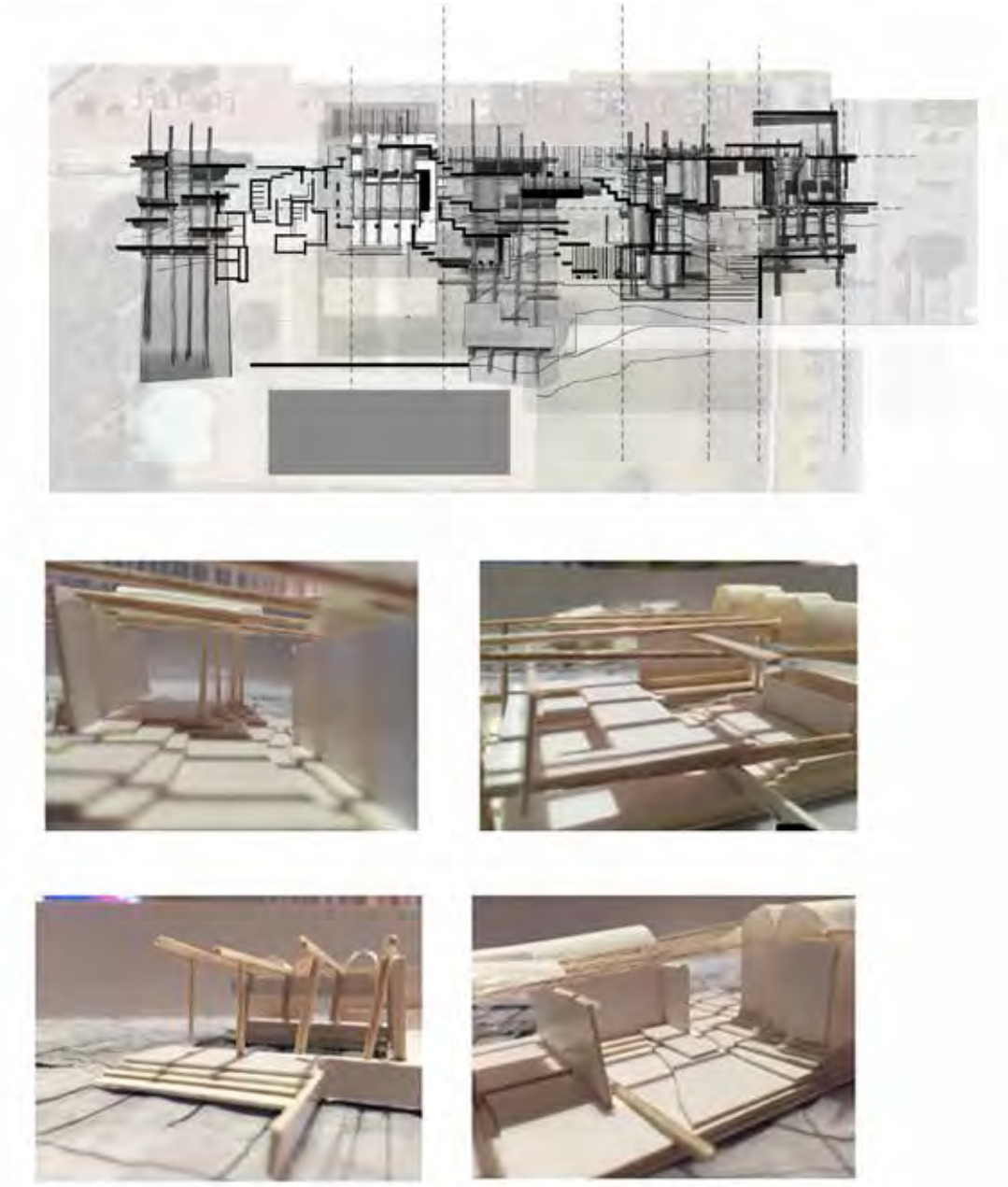


Figure 12: Architectural model showing diagonal circulation, structural gutters, sloped ground and retaining walls

These conditions where then translated into an architectural model in figure 12. The model began to arrange the suggested experiential qualities into a working programmatic building. The program of the building elaborated on the original public swimming pool. The public swimming pool is the core whilst the other programs work off of it. Off the west of the public swimming pool, which maintains its five-rand entry, is a private gym, only accessible to members. Further west, towards Searle Street is a restaurant and café, which service both the surrounding offices as well as the pools and gym and provide an activity node for the site. Along Searle Street are private rented out offices, which activate the street as well as define and protect the edge of the swimming pool facility. Tucked on the Eastern side of the public pools under the tall trees is a pool therapy facility. The facility consists of two doctors rooms, a rehabilitation pool, a therapy pool, a sauna and a steam room.

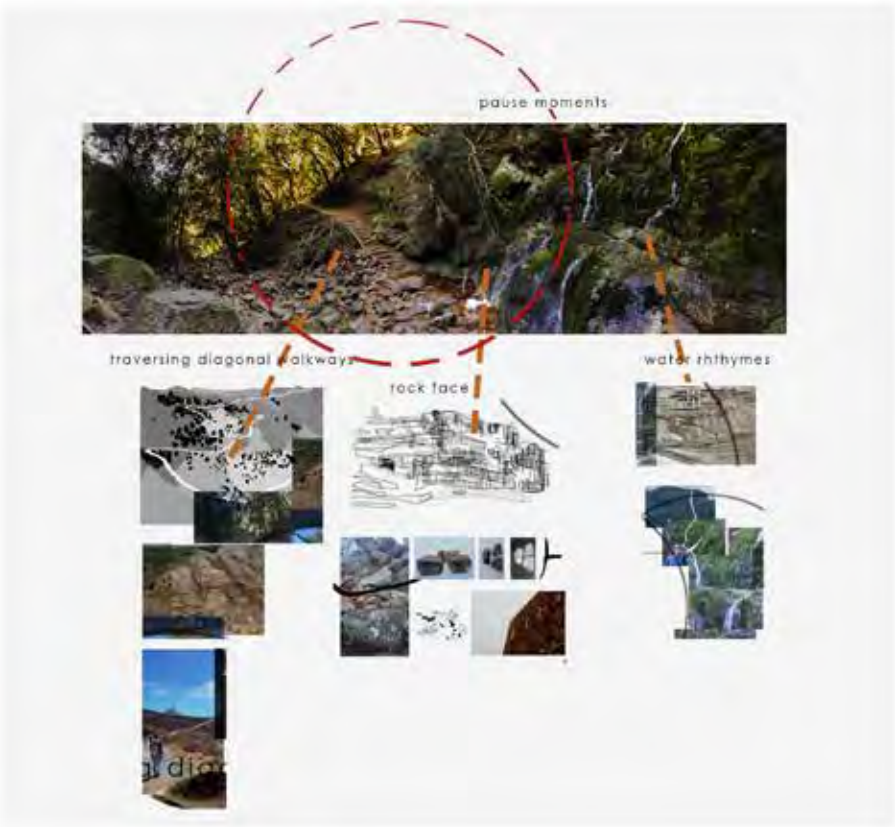


Figure 13. Extracting archetypes of phenomena from the mountain

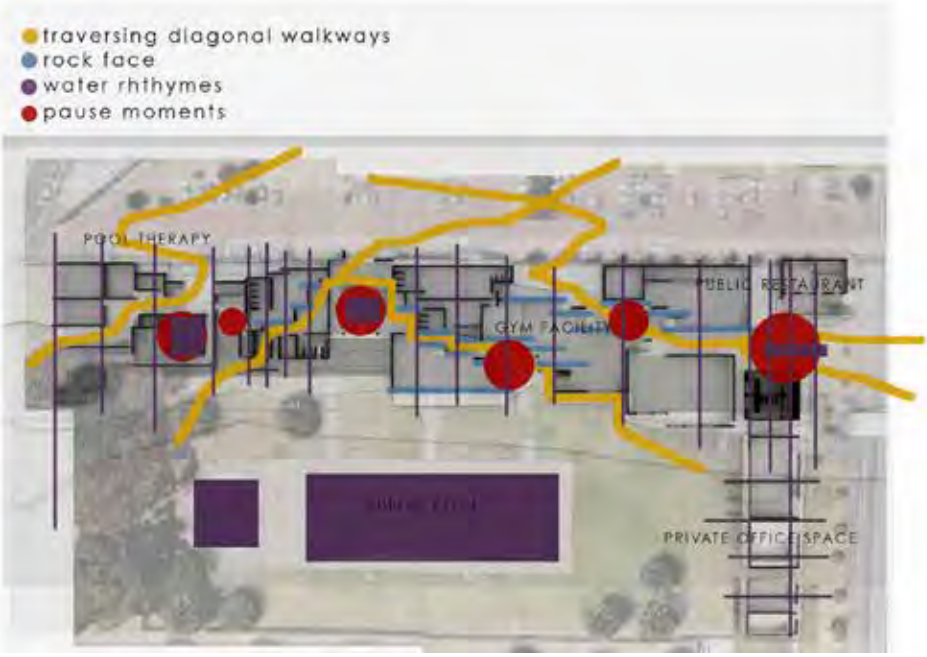


Figure 14. Archetypes of phenomena from the mountain evident in the plan

The program synthesizes into the experiential architecture and the building begins to translate the phenomena of the mountain. The phenomena are represented in figure 13. The photograph of the mountain shows the traversing pathways of the ridge condition, the stone from the rock face condition and the waterfalls which could be imitated in the building's gutters. These three types are shown in the plan in figure 14. By translating these phenomena of the mountain into architecture it is hoped to trigger the user's memory of the mountain into the experience of the building.

When one traverses diagonally up the site and through the building, one's body understands that they are traversing up the mountain. When one looks up to the mountain, they can see the rock face, whilst they can directly touch and understand the quality of the rock face's stone through the building's stonewalls which surrounds them. Similarly, when it rains and the waterfalls activate the mountain's face, a user of the building would understand the magnitude of the waterfalls they see on the mountain directly through the waterscape of the open gutters in the building. In this way, the building continuously re-orientates the user to their natural surroundings.

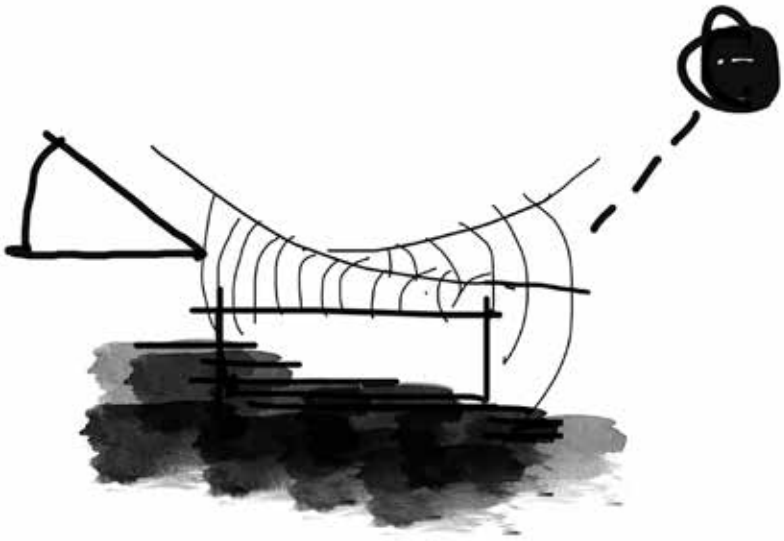


Figure 15. Roof scoops responding to orientation of the site , connecting the sun and the view

Figure 16. Façade study, an analogy of the mountain and cloud

In the development of the design, the intention was to continuously re-orientate the user with their natural surroundings. The site condition orientates the building in a north-south direction. The view of the mountain is situated on the top of the slope on the southern side whilst the sun and the pool are situated on the northern side. Although the plan translates the motion of ascending the mountain, the roof became important to interact the southern view with the northern light. The form of the roof therefore responded to these conditions in the form of scoops which lifted up at moments to let light in or accentuate the view.

The animated form of the roof contrasted with the grounded stonewalls and became interpreted as an image of the mountain and the floating cloud. These two languages became the informants for constructing the architecture into tectonic details in a way that re-iterated the atmosphere of the mountain to the user.

SECTION 4

Translating phenomena into tectonics details

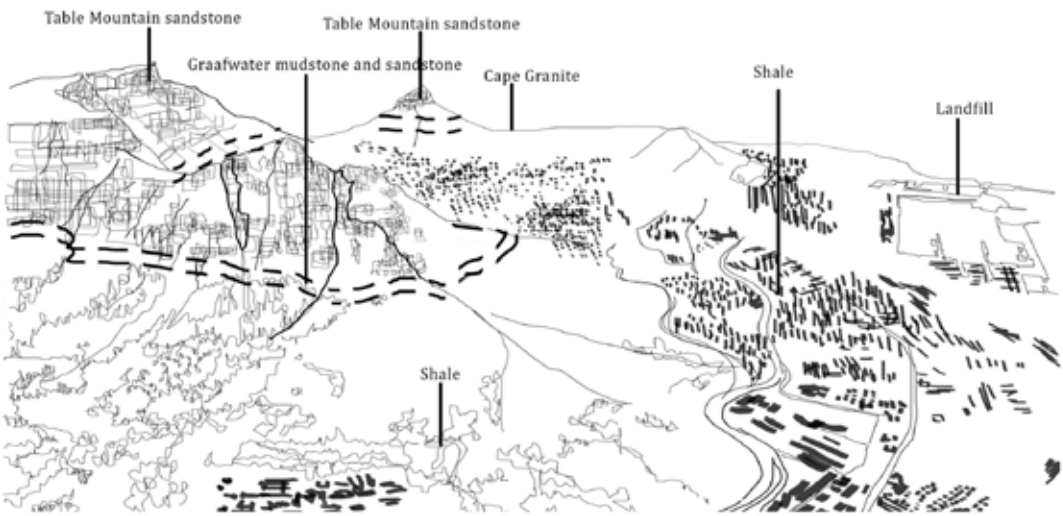


Figure 17. Atmospheres translated to stone types

The most direct way of translating phenomena into tectonic detail was using the matching material. Figure 17 shows the line drawing of experiences present along the mountain translated to the stone layers, which occur there.

Crompton describes the different layers of rock that make up the mountain to illustrate the formation of the Cape Town landscape. This is portrayed in the understanding of a variety of rocks and their respective properties. By understanding how these rocks have shaped Cape Town's landscape, it is hoped to understand how the rocks behave as materials and their respective geological properties. For instance, the more resistant and harder granite and sandstone predominantly make up the hills and mountains in the Cape Town area whilst the softer shale, that is easily worn away, forms the low lying areas including the Cape Flats. [14]

Crompton describes the Cape Town landscape being defined by the flat top of Table Mountain sitting over 1000 m above sea level with the contrasting peaks of Lion's Head and Devil's Peak on either side. These mountains contain most of the stone resources in Cape Town and characterize the city as we know it today. These resources predominantly include; Table Mountain sandstone; Cape granite; Malmesbury shale and graafwater mudstone. [15]

[14] Crompton, J. S. (2004). *The Rocks and Mountains of Cape Town*. Cape Town: Double Storey. p.24

[15] Ibid p.12

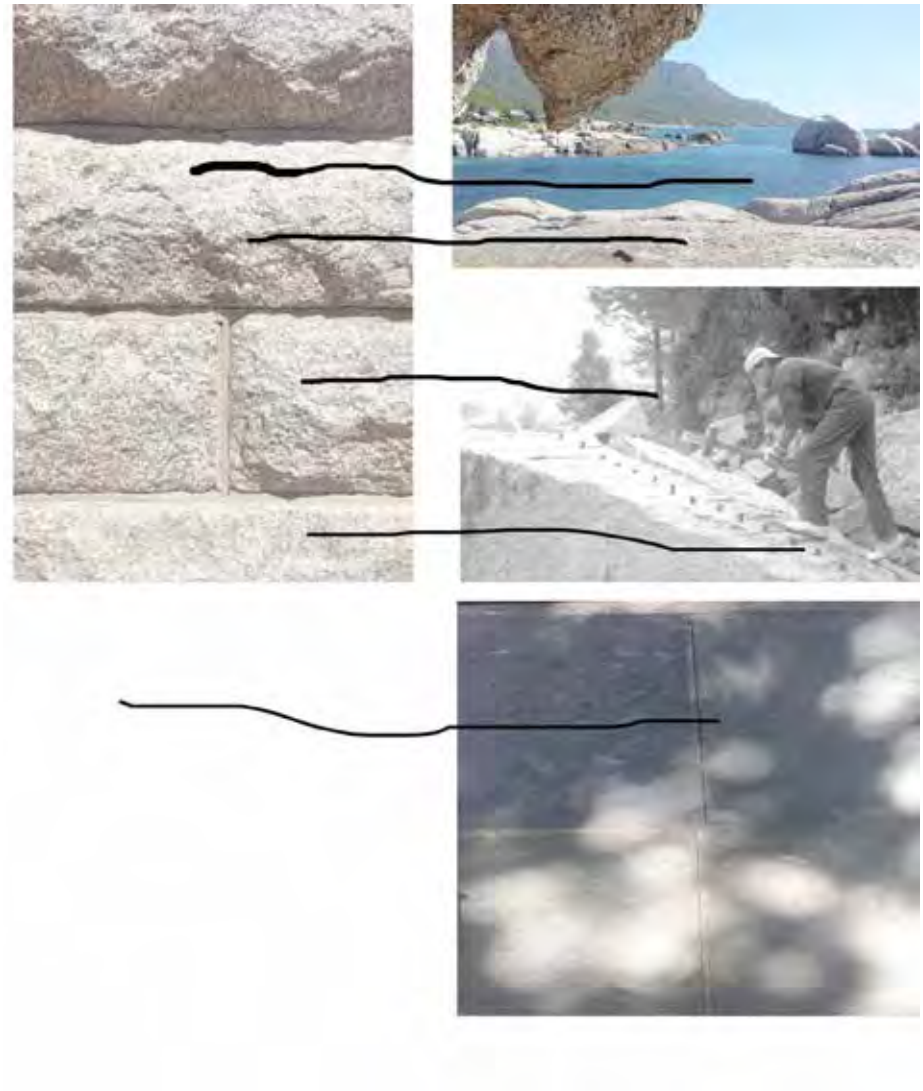


Figure 18. Collage depicting memory of stone; nature, hand crafted, weather

Phenomenology of stone

Norburg-Schulz describes phenomenology as a 'return to things.' Figure 18 describes the return to the origin of the crafted stone's memory. The figure shows how cape granite stone has associations to its natural origins in how its 'grown' up along the coast in its lava formation to give its rounded form. The stone also has associations of how it has been crafted by man through labour tool indents that characterize the stones chipped face. Lastly, the association of time and nature connected to how the stone reacts to wind, water and sun. Through these ways, the stone is charged with memory. The material therefore evokes the individual's memory. In this way, the material becomes more than an efficient building material and contributes toward meaningful 'place making' as termed by Norburg-Schulz. [16]

[16] Norburg-Schulz, C. (1976). *The Phenomonon of Place.* New York: Princeton architectural print. P.416

Figure 19. Explorations of stone showing joint structures and stone. Top: Table Mountain Sandstone, Cape Granite , Malmesbury Shale

Investigating stone

Figure 19 shows a process of experimenting with stone. It became important to understand stone in terms of its character and behavior in order to understand its tactile and phenomenological value. A series of studies were completed in order to understand how the stone reacts and what its limitations and potentials were.

In conclusion, it was found that the joint structure of each stone type defined the stone's character. Table Mountain sandstone was characterized by its square joint system. The stone broke easily into ninety-degree solid blocks and consequently expressed a heavy and solid impression. The Stone had a smooth like finish and red orange tones, depending on its weathered conditions. Contrasting the geometric appearance, cape granite was more brittle. The black and white flecked stone broke into organic rounded pieces. However, it was easier to chisel into rounded smooth artifacts. The rock thus embodied a softer appearance. Opposing both these stones, the dark malmesbury shale broke into thin shard-like jagged pieces. They were of a smaller grain and had less predictable forms. Each of the three stone types naturally had their own aesthetic value of what the material's ability tended toward, and hence, embodied an associated atmosphere.

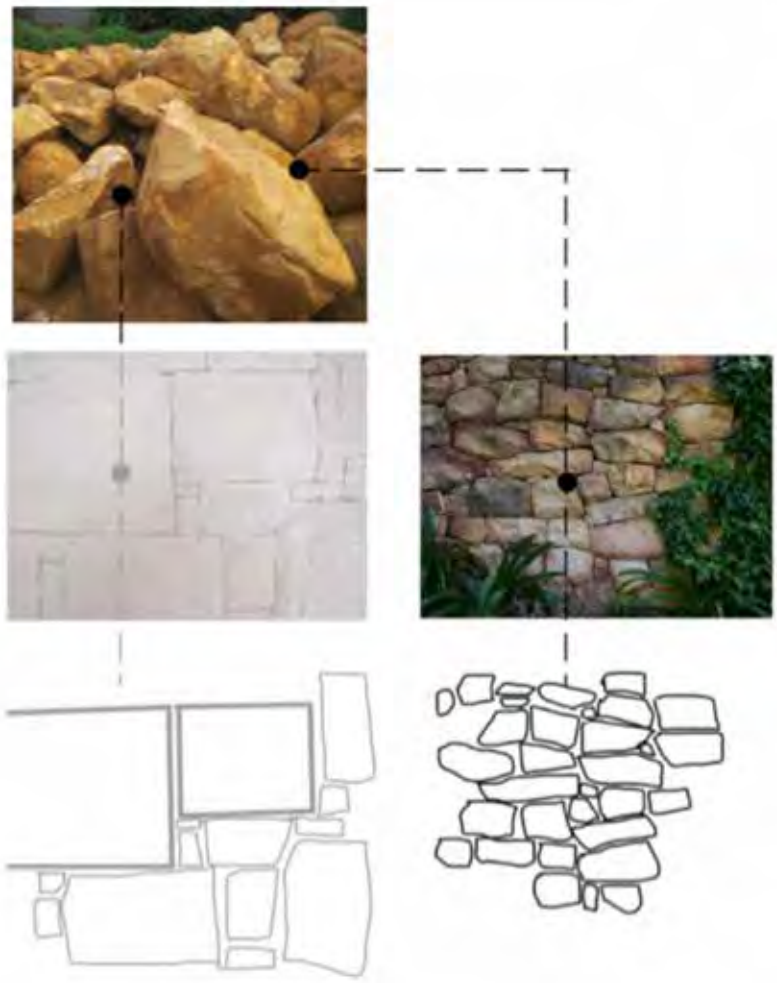


Figure 20. Table Mountain Sandstone study. What the stone wants to be vs manipulating the stone against its character

Table mountain sandstone was chosen to be used in the building. The stone is visible on the rock face of the mountain and therefore directly translated the experience of the mountain through materiality to the user. The block-like character of the stone also re-iterated the heaviness of the mountain. This, as well as the dark weathered tones of sandstone, also allowed the lightness of the roof to contrast as two different systems.

Figure 20 shows a study looking at the tectonic of Table Mountain Sandstone. It was important to use the stone in a way that promoted its natural character. The image depicts two different approaches of using the same stone. Both have a recessed grout and which creates a shadow line and can be interpreted to give the impression of the wall being a more natural dry wall. However the wall on the right appears to embody the character of the sandstone more in the way that the rock is dressed. The rock appears to maintain its natural imperfect edges compared to the left's more prominent geometry.

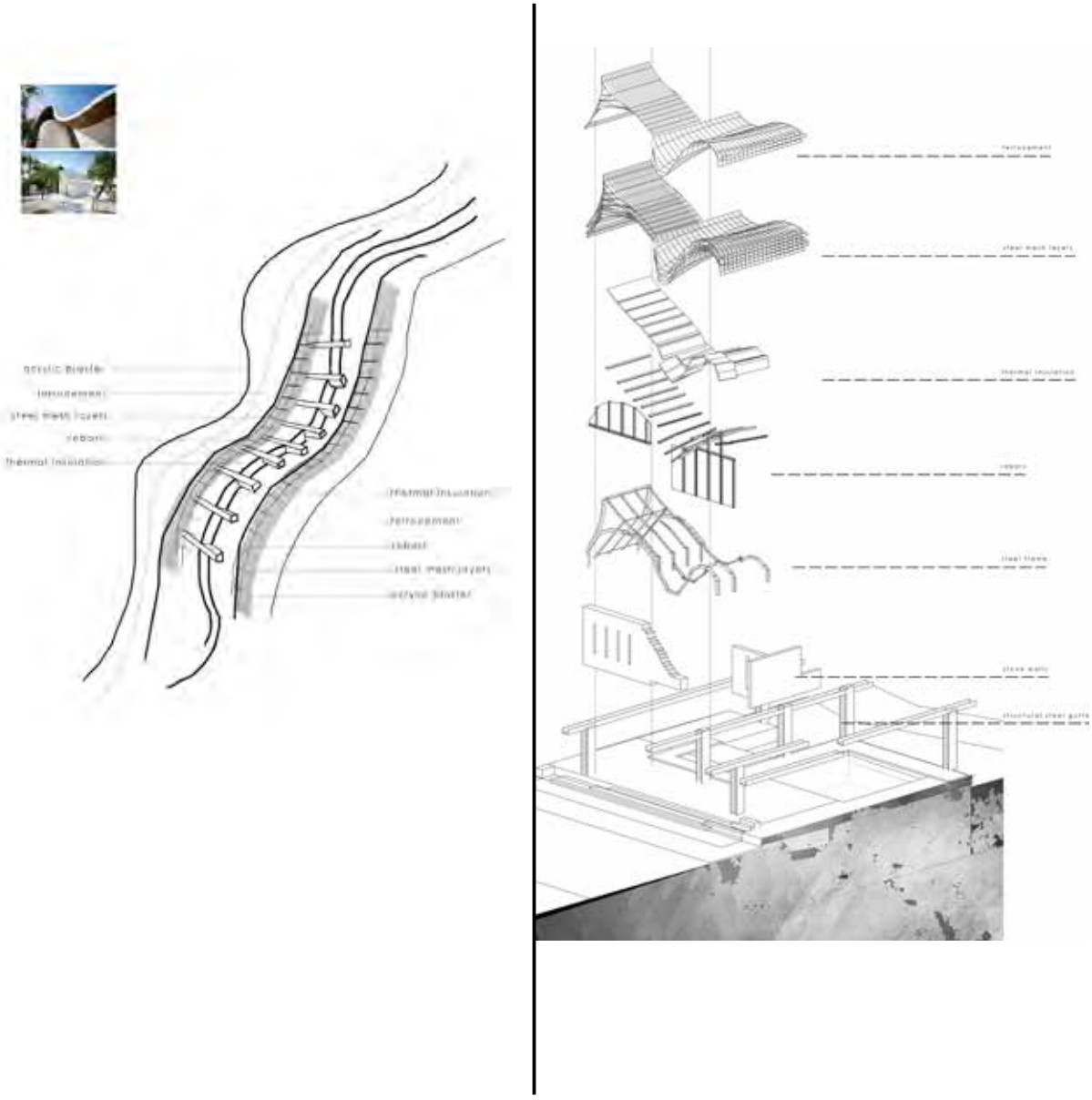


Figure 21. Studies of ferrocement skin

Cloud

Contrasting the grounded stone wall, the roof structure needed to express a light floating system to represent the fluidity of a cloud. White ferro-cement was selected to achieve the smooth flowing tectonic.

Figure 21 shows a study of the ferrocement skin of Greek Orthodox chapel in Cyprus by Michail Georgiou. The ferrocement skin's structure was applied to the roof. The skin achieves a 150mm thickness and sits on a steel frame structure. Similar to the study, the roof system was to sit on a steel frame structure. The steel frame raised up at particular end points in order to scoop light in or maximize the view of the mountain. These frames were then connected by steel C-sections. The fluidity of the cloud was then achieved by the ferro-cement's construction of draping a steel mesh material across the roof. This gave the system a fluid cloth-like appearance that could represent a tablecloth floating in the wind.

Figure 22. Development sketch of the facade design. The facade begins to illustrate the lightness of the roof structure. At this point the roof design still appeared heavy and attached to the ground and needed to be developed to appear almost floating.

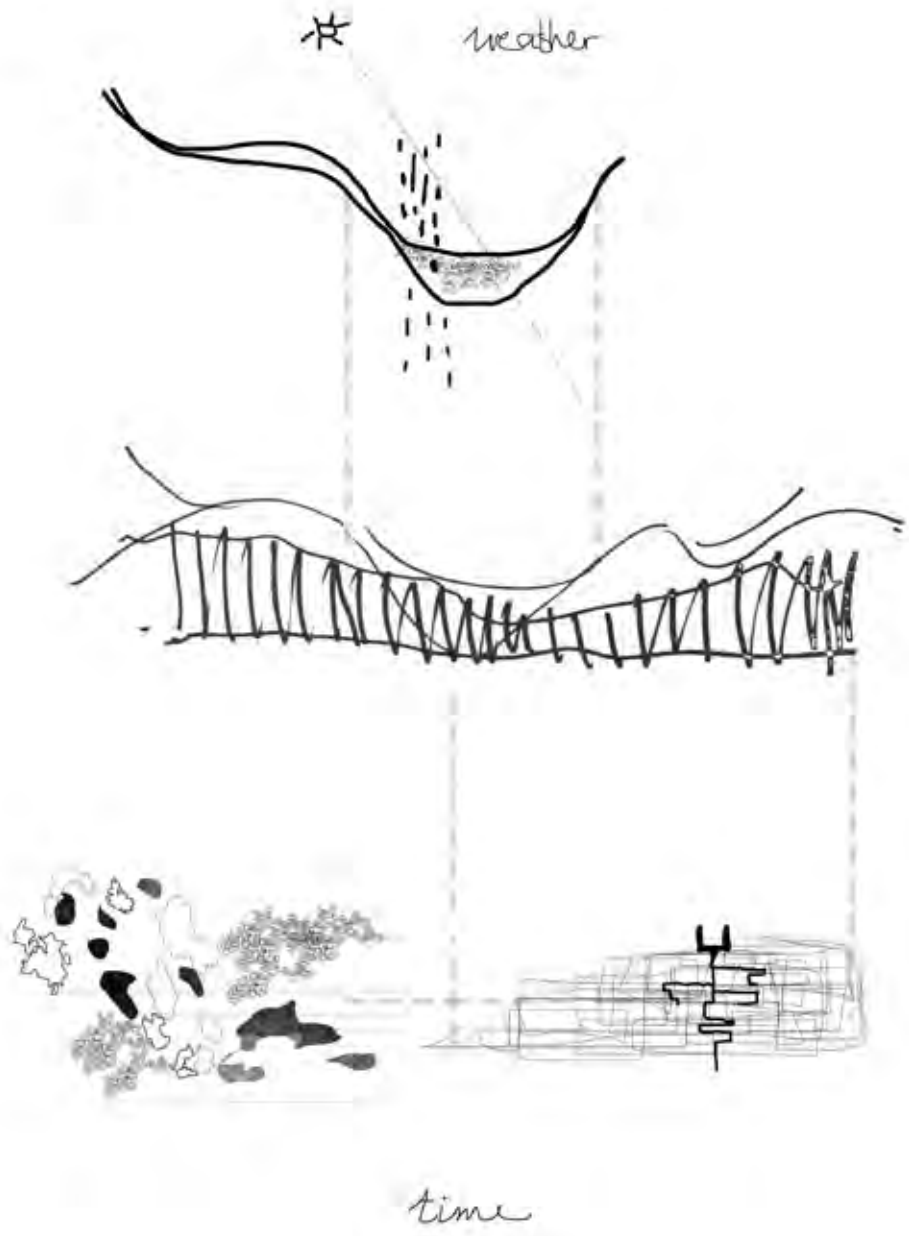


Figure 23. Roof and wall tectonics representing weather and time

The analogy of the cloud and mountain continued into the ideas of tectonic detailing. It became important to emphasize the details of time and weather in a way that re-orientated the user once again to their natural surroundings. Figure 23 alongside shows how the roof began representing the sky and weather whilst the walls expressed elements of time and growth of nature. The roof was perforated at moments to allow dappled hazed sun into the space. This also allowed for rain trickle in at appropriate moments such as outside circulation and shower rooms.
The detailing of the stonewall enabled water to trickle down the exterior face and stain the surface and lichen and moss to grow, emphasizing the role of time.

Conclusion

The object of this dissertation was to investigate the phenomena of intangible experience and translate it into architectural forms through the use of drawings. The outcome, of which , has been a process of explorations which have given insight into a deeper understanding of dwelling and atmosphere. Subsequently, it has informed an architecture which enhances the body's journey. An architecture which takes care to enrich the mind's dwelling experience, both consciously and subconsciously.

The architecture becomes a interpretation machine, translating the experience of the mountain through memory triggers and associations. It interprets itself through the mountain, and the mountain interprets itself through it. A vehicle for transcending space and imagination.

Table of figures

Crompton, J. S. (2004). *The Rocks and Mountains of Cape Town*. Cape Town: Double Storey.

Evans, R. (1997). *Translations from Drawing to Building and Other Essays*. London: Architectural Association London

Norburg-Schulz, C. (1976). *The Phenomonon of Place.* New York: Princeton architectural print.

Pallasmaa,j. (2009). *The Thinking Hand.* Chichester: Wiley.